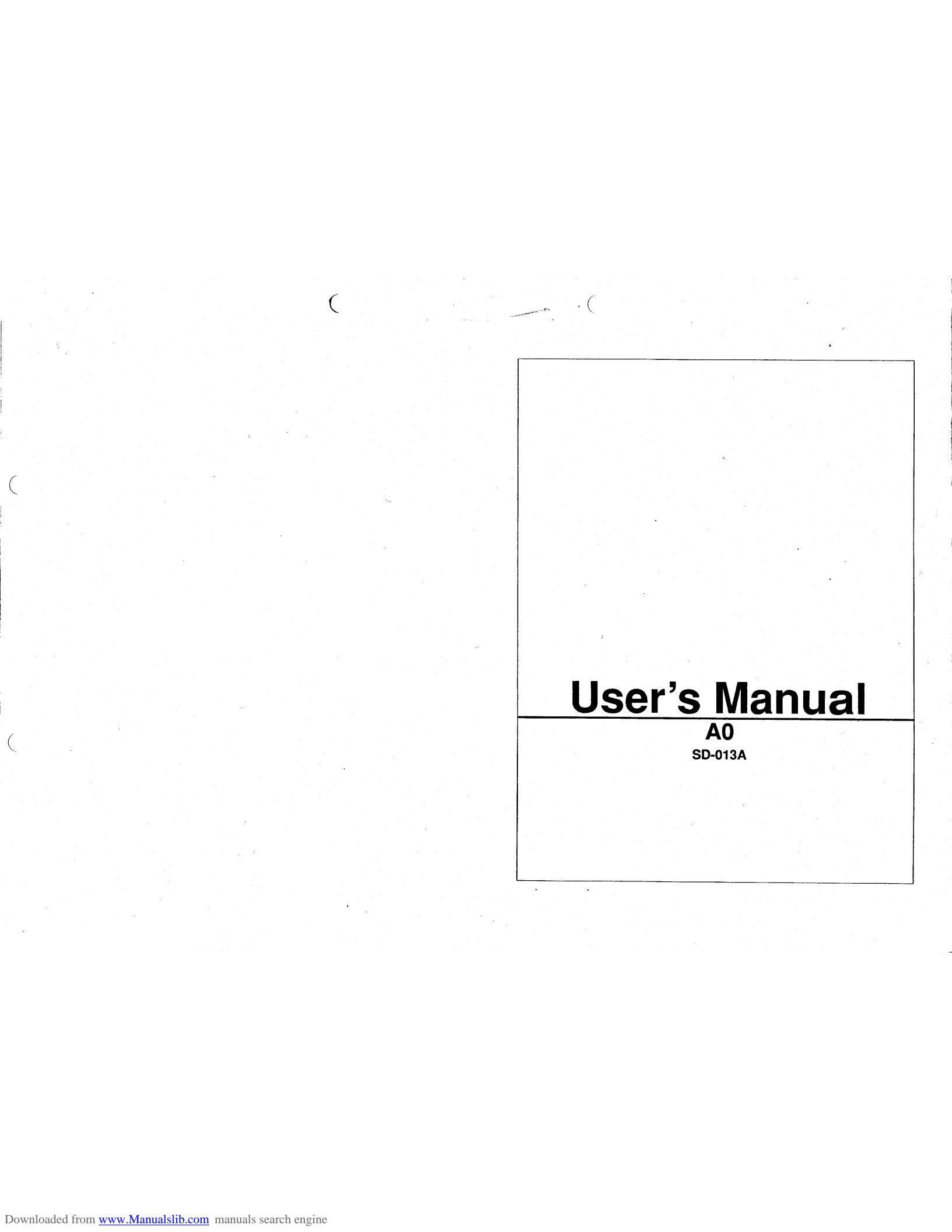


User's Manual

A0

SD-013A





USER'S MANUAL: A0
December 1, 1992 - Version 1.1

WACOM Computer Systems GmbH:
Hellersbergstrasse 4, D-4040 Neuss 1, Germany
49-2131-166001
49-2131-101760 (Fax)

WACOM Technology Corp.
501 SE Columbia Shores Blvd. Suite 300
Vancouver, WA 98661, U.S.A.
206-750-8882
800-922-6613 (USA only)
800-922-6635 (USA Technical Support)
206-750-8924 (Fax)
415-960-0236 (BBS)

WACOM Co., Ltd.
2-510-1 Toyonodai, Otone-cho, Kitasaitama-gun, Saitama, 349-11 Japan
81-480-72-7613
81-480-72-7617 (Fax)

WACOM Korea Co., Ltd.
371-36, Karibong-dong, Kuro-ku, Seoul, Korea
82-2-869-5595
82-2-869-1241 (Fax)

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FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

BZT Notice

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

[1] Digitalisiertablett, SD-013A
(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der BMPT-AmtsblVfg 242, 243/1991 Vfg 46/1992 funkentstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z.B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Bundesamt für Zulassungen in der Telekommunikation (BZT) wurde das Inverkehrbringen dieses Geräte angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

[2] WACOM Co., Ltd.
2-510-1 Toyonodai, Otone-cho, Kitasaitama-gun
Saitama 349-11 JAPAN

Name und Anschrift des Herstellers/Importeurs

Safe and Proper Use of SD-013A

■ Use and Storage

- Do not place a SD-013A where infants can reach it.
- Do not place a SD-013A where the environmental temperature exceeds the operating temperature range (5° C ~ 40° C).
- Do not place a SD-013A where there may be a severe or sudden temperature change (e.g., outdoors, in vehicles, etc.)
- Do not place a SD-013A where there is high humidity (operating humidity: 20% ~ 80%).
- Do not place a SD-013A in a dusty environment, in direct sunlight, or close to a heater.
- Do not place a SD-013A in a wet environment or close to items producing a strong magnetic field.

■ Handling

- Do not put heavy articles on your SD-013A. Do not drop articles on your SD-013A.
- Protect your SD-013A from intensive shock or vibration. Hitting or dropping your SD-013A may damage it.
- Do not disassemble the SD-013A. There are no user serviceable components. Disassembly will void your warranty.
- Do not disassemble the stylus and the cursor.
- Do not use thinner, benzene, alcohol, or other volatile liquids to clean the SD-013A, the stylus or the cursor.

■ Operation

- Only one pointing device, the stylus or the cursor, may be used at a time on the SD-013A.

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2
3
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About the Manuals

NOTICE

This manual does not include a stand description.
Refer to the manual for the stand, if necessary.

This manual presents information on digitizers in general and on the WACOM SD-Series in particular with sections on principles of operation, definitions, maintenance, and DIP switch settings.

- For PC installation procedures, see *PC Installation and Utilities*.
- For Macintosh® installation procedures, see *Macintosh Installation and Operation*.
- For programming information, send for the *WACOM Programmer's Manual*.

The WACOM Advantage

Congratulations on choosing the WACOM (pronounced **walk'- come**) advantage and welcome to the world of cordless digitizing.

The unique WACOM technology provides a set of selection and drawing tools ergonomically designed to be natural extensions of the hand. *Cordless*, they free the designer from the interruption of snarled cords. *Very light*, they use no batteries and no magnets.

Users can choose from a variety of pointing devices including a four-button cursor, a sixteen-button cursor, a standard stylus, a *slim* stylus and the first cordless, battery-free *pressure* stylus providing the user with a new dimension of input capability.

The WACOM technology has also developed a tablet surface that allows the stylus-to-tablet "feel" to simulate a pen-to-paper feel. Thus the drawing tools, selection devices, and tablet provide a more natural and comfortable man-machine interface.

Great Choice!

Technology

Principles of Operation

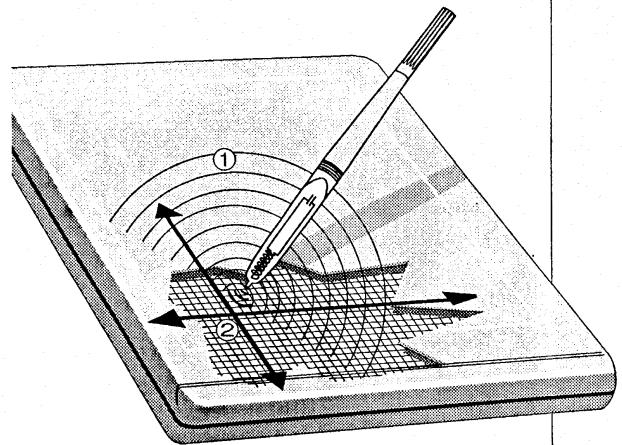
With WACOM's patented technology, the digitizer alternates continuously between transmit and receive mode (changing modes about every 20 microseconds). Refer to Figure 1-A. In transmit mode, the tablet sends a signal at a particular frequency, producing electromagnetic resonance in the pointing device. The pointing device stores the electromagnetic energy using a coil-and-capacitor resonant circuit.

When the tablet goes into receive mode, the pointing device re-emits a signal at a different frequency which carries switch and pressure data to the tablet. The tablet computes the coordinates based on signal strength across several grid wires under the tablet surface. The tablet then translates the data to millimeters or inches, ASCII or binary,¹ and sends the data through the serial port to the host.

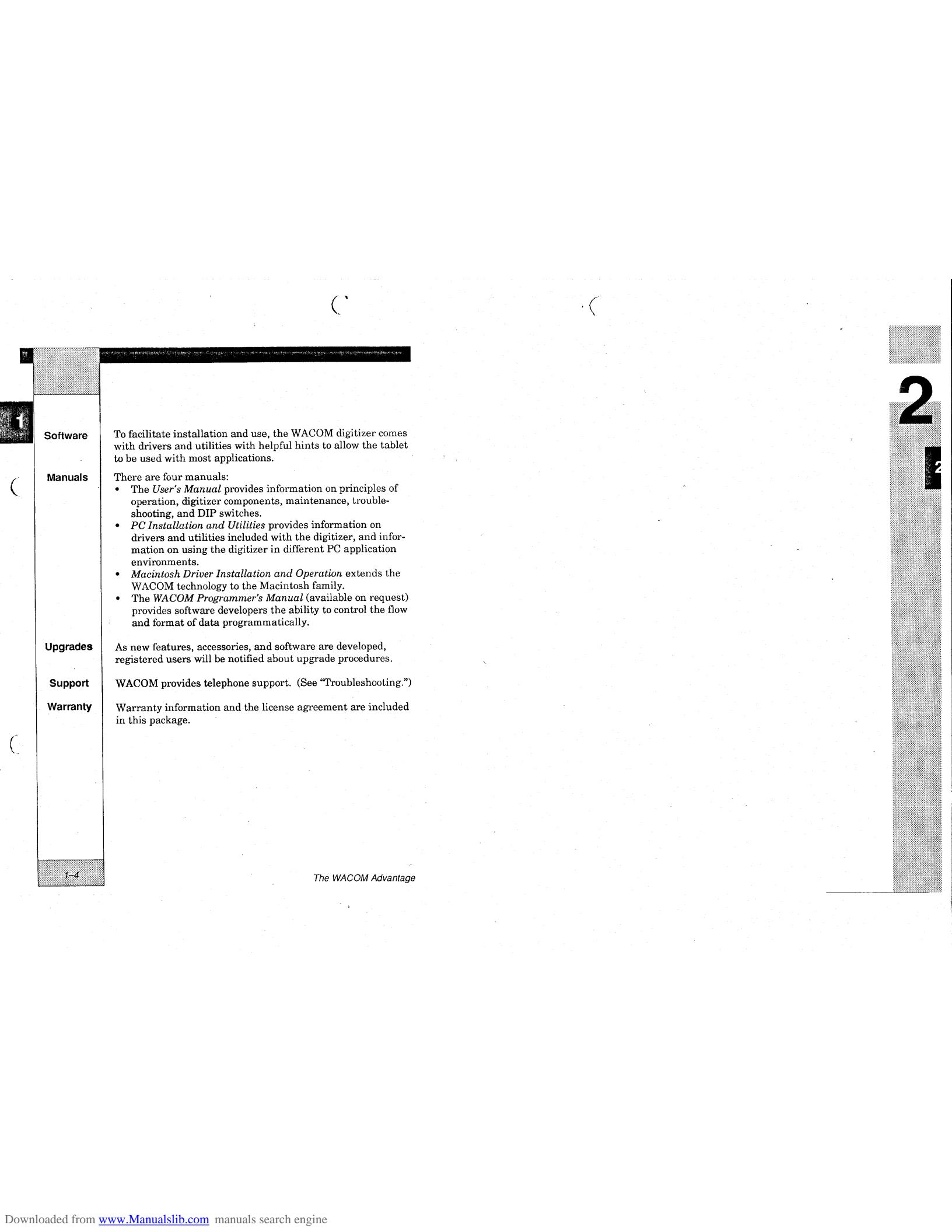
Because there is no power source in the pointing devices, calibration and tuning are unnecessary.

¹ Depending on DIP switch settings or programmer instructions

Figure 1-A
The WACOM Technology



- ① TRANSMIT MODE — The tablet sends a signal at frequency A, producing electromagnetic resonance in the pointing device.
- ② RECEIVE MODE — The pointing device re-emits a signal at frequency B.



1

Software

To facilitate installation and use, the WACOM digitizer comes with drivers and utilities with helpful hints to allow the tablet to be used with most applications.

Manuals

There are four manuals:

- The *User's Manual* provides information on principles of operation, digitizer components, maintenance, troubleshooting, and DIP switches.
- *PC Installation and Utilities* provides information on drivers and utilities included with the digitizer, and information on using the digitizer in different PC application environments.
- *Macintosh Driver Installation and Operation* extends the WACOM technology to the Macintosh family.
- The *WACOM Programmer's Manual* (available on request) provides software developers the ability to control the flow and format of data programmatically.

Upgrades

As new features, accessories, and software are developed, registered users will be notified about upgrade procedures.

Support

WACOM provides telephone support. (See "Troubleshooting.")

Warranty

Warranty information and the license agreement are included in this package.

The Basics

A digitizer is an electronic device that transmits coordinate data to software running on a host computer. Like those shown in Figure 2-A, digitizer components typically include a flat drawing surface called a "tablet," a selection tool called a "cursor" and a drawing tool called a "stylus." The cursor and stylus are referred to generally as "pointing devices."

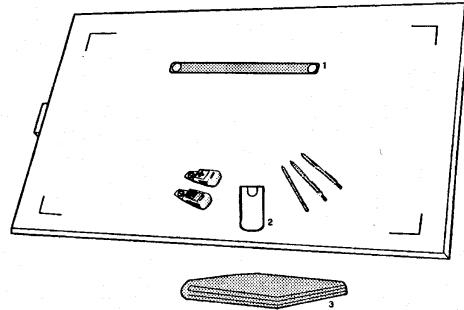


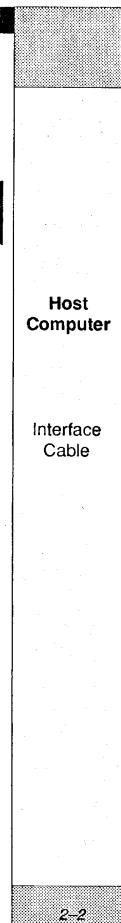
Figure 2-A
Digitizer Components

¹Metal holding strip - Used to hold drawings. Press "PUSH" to remove it.

²Cursor pocket - Magnetically attached on the digitizer surface.

³Dust-free cover cloth - Hang it on the digitizer surface to prevent the digitizer from dust while you do not operate the digitizer.

The Basics



Digitizer size is expressed in terms of *effective area*, also referred to as the *active* or *sensing area*. The *effective area* is the part of the tablet surface which can detect the presence of the pointing device. *Reading height* is the maximum distance above the surface of the tablet that a pointing device can be detected. When a pointing device is being detected by the tablet it is said to be *in proximity*.

Host Computer

The WACOM Super Digitizers (SD-Series) come with an interface cable, drivers, and utilities for IBM PC compatibles or Macintosh computers. Cables, drivers, or support for many Unix workstations and other computers are available on request.

Interface Cable

NOTICE
WACOM Super Digitizers must be connected to their host computer with a WACOM cable. Other computer cables will not work properly.

WACOM authorized interface cables are:

- TJ-417-2 (9-pin to 9-pin, 2 m) for IBM PC AT compatibles
- TJ-211A-2 (9-pin to 8-pin, 2m) for Macintosh
- TJ-412-2 (9-pin to 25-pin, 2 m) for other computers

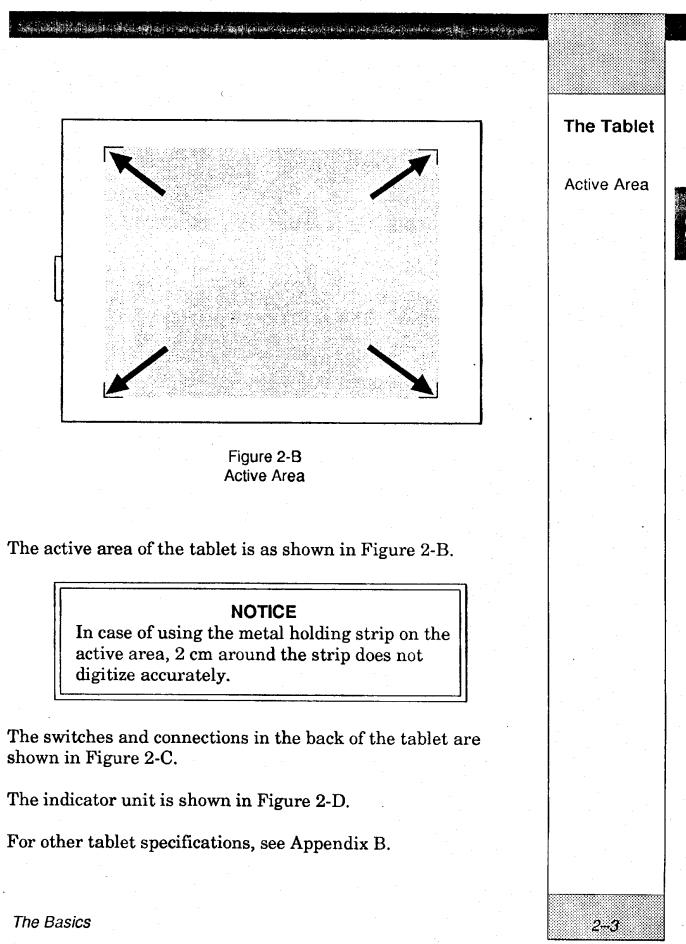


Figure 2-B
Active Area

The active area of the tablet is as shown in Figure 2-B.

NOTICE
In case of using the metal holding strip on the active area, 2 cm around the strip does not digitize accurately.

The switches and connections in the back of the tablet are shown in Figure 2-C.

The indicator unit is shown in Figure 2-D.

For other tablet specifications, see Appendix B.

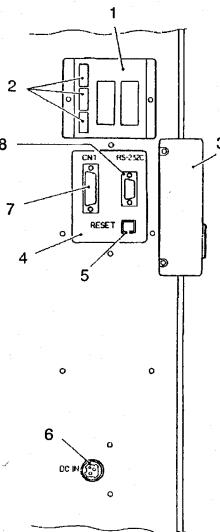


Figure 2-C
Tablet Rear View

1 DIP SWITCH SET WINDOW
Sets the communication parameters with a host computer, and the tablet behaviour. Normally the window is closed with two screws.

2 DIP SWITCHES
See Appendix A.

3 INDICATOR UNIT
See section on Indicator Unit.

4 CONNECTOR PANEL
Housing the interface connectors.

5 RESET
Reinitializes the tablet according to the DIP switches.

6 DC IN
Connection for the DC cable of the AC power adaptor.

7 CN 1 (15 pins)
Connection to be used for maintenance and reserved for additional functions in the future.

8 RS-232C (9 pins)
Connection for the interface cable that connects the tablet with a host computer.

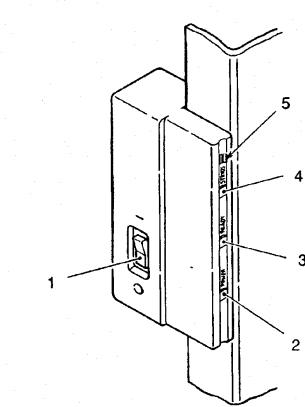


Figure 2-D
Indicator Unit

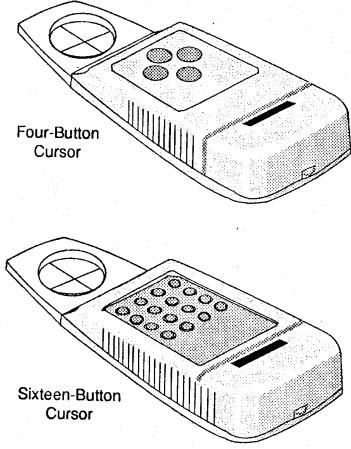
1 POWER ON/OFF switch of the tablet.

2 POWER LAMP Turns on RED while the power is ON.

3 READY LAMP Turns on GREEN while the pointing device is within effective reading range.

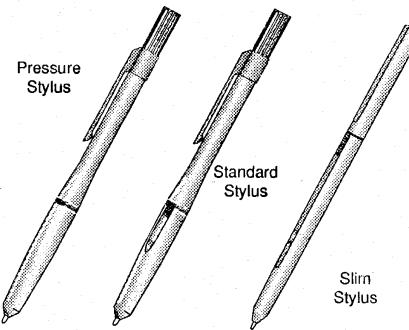
4 STATUS LAMP Turns on GREEN while the pointing device is within effective reading range and that a pointing device switch is ON.

5 TONE Beep sound

Figure 2-E
Four-Button and Sixteen-Button Cursors

The WACOM pointing devices are shown in Figures 2-E and 2-F. For specifications, see Appendix B.

The four-button *cursor*, as well as the sixteen-button *cursor*, is a mouse-like tool with a pair of crossed hairs used for making precise selections. The replaceable button-menu panels are attached for the sixteen-button cursor to serve your choice. An eyelet is located at one end for attaching a safety cord.

Figure 2-F
Pressure, Standard and Slim Stylus

The *pressure stylus* has a pressure-sensing tip and a detachable clip. Model SP-300 has a firmer feel (0-500 grams pressure) and can be identified by a blue band. Model SP-310 has a softer feel (0-300 grams pressure) and can be identified by a red band.

The *standard stylus* is a pen-like tool with a tip switch, a side or barrel switch, and a detachable clip and is available in two models. The SP-200, with a gray band, is a nonstroke stylus meaning there is a minimum amount of travel needed to close the tip switch. The SP-210, with a red barrel switch, is a stroke stylus meaning there is more travel needed to close the tip switch. The tip is available in plastic for drawing directly on the tablet or in pen-like color refills typically used for tracing.

The *slim stylus* is a slim type stylus with the same functions as the standard stylus, and is available in two models: the SP-200A with a gray clip, the SP-210A with a magenta clip.

**DIP
Switches**

The digitizer operates according to a set of parameters that the user can define through DIP¹ switches. The digitizer reads the switches whenever the user turns the tablet on or presses the RESET button. For the location of switches and buttons, see "The Tablet" in this section.

To change a DIP switch setting, use a small tool (such as a tiny screwdriver or ballpoint pen) to flip the switch. Do not use a pencil as the graphite can collect under the switch.

The command set you select (using the appropriate DIP switches) affects the meaning of the remaining DIP switches. Be sure to use the correct DIP switch chart for the command set you are using. For DIP switch defaults, definitions, and options, refer to Appendix A.

Programs may alter the effects of DIP switch settings. Your software may set the tablet in a mode not set in the DIP switches.

¹ "DIP" is an acronym for "Dual-In-line Package" — a type of switch housing that originated with integrated circuits.

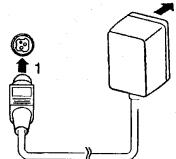
It is a good practice to only change DIP switch settings with the power OFF since the digitizer will read the new settings when power goes ON.

3

Installation

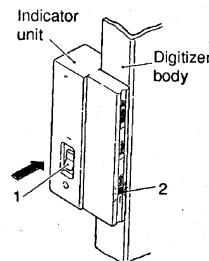
To install your digitizer follow the steps below.

■ Plug in the power supply.



1. Connect the DC plug into the DC IN on the digitizer back.
2. Insert the AC power adaptor¹ into an outlet.

■ Turn on the power.



1. Turn on the red power switch on the side of indicator unit.
ON is marked "I".
OFF is marked "O".
2. Check if the power lamp, on the indicator front, turns on.

¹WACOM authorized AC power adaptors are:

- POW-A044 for 120V AC power
- POW-A040 for 220V AC power

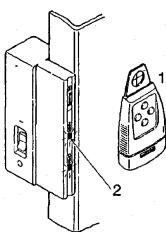
Installation

Step 1

Step 2

Step 3

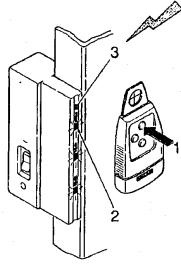
■ Check if the cursor transmits a signal.



1. Place the cursor (either four-button or sixteen-button cursor) within the active area of the digitizer.
2. Check if the green ready lamp turns on, indicating the cursor is detected.

Step 4

■ Check if the cursor switch is detected and the buzzer sounds.



1. Press one cursor switch while placing the cursor within the active area.
2. Green status lamp will go on indicating that the cursor switch is pressed.
3. At the same time the buzzer sounds for approximately 40 msec when the buzzer dip switch is set to ON.
(The factory setting of the buzzer is ON.)

• Repeat 1 through 3 for all the other cursor switches.

3-2

Installation

Installation

3-3

Now, you are ready to connect the interface cable with a host computer, if every indicator functions normally in the steps 1 through 4.

For cabling to your host computer, refer to your computer manual.

Maintenance

Regular cleaning of the digitizer will help prolong its life and requires careful attention. To clean the digitizer, follow these steps:

1. Set the tablet's power switch to OFF.
2. Unplug the power cable from the back of the digitizer.
3. Dilute a neutral detergent solution, such as dishwashing liquid, in a bowl of lukewarm water.
4. Use a soft cotton, lint-free cloth to clean the tablet surface, cursor, and stylus.

CAUTION

Do not clean the digitizer with any volatile liquid like paint thinner, turpentine, or benzene. Such solvents may damage plastics used in the digitizer.

Caution

Use proper care when working with or storing digitizer components:

- Avoid extreme heat and cold. Do not store components outdoors.
- Do not allow the components to stay in the direct rays of the sun.
- Do not allow any fluids to come into contact with the components, except when cleaning.
- Keep the tablet surface free of dust.
- Do not drop or hit the tablet, cursor, or stylus.
- Do not use any volatile liquid, like paint thinner, turpentine, or benzene. They may damage plastics used in the tablet.

Be sure that you have the correct refill for your stylus. Pressure styli will only work with pressure refills. Standard styli use standard or color refills.

Pressure stylus refills are entirely white.

Standard stylus refills have white tips and brass shafts.

Color stylus refills look like ball point pen refills, and are stainless steel.

To replace the refill, follow these steps:

1. Using a tool such as a pair of small pliers or strong tweezers, pull the old refill straight out of the stylus.
2. Insert the new refill straight into the space where the old refill had been.
3. Check to make sure the new tip is firmly in place by holding the stylus vertically and applying firm pressure on the tip.

CAUTION

Do not attempt to unscrew your stylus! It is all one piece. Attempting to separate it into two pieces will break your stylus.

Replacing Refills

Obtaining Refills

Standard and pressure stylus refills are made from Duracon, especially for WACOM. Contact your WACOM representative for replacements.

Color refills are available from your local WACOM representative.

NOTICE

Standard and color stylus refills will not work properly in pressure styli.

To find your WACOM representative contact:

WACOM Computer Systems GmbH
Neuss, Germany

WACOM Technology Corp.
Vancouver, WA, U.S.A.

WACOM Co. Ltd
Tokyo, Japan

Addresses and telephone numbers are in the front of this manual.

Troubleshooting

1. If your digitizer is not working at all:
 - Is the AC power adaptor connected to the main?
 - Is the DC power cable connected to the tablet?
 - Is the power switch turned on?
 - Is the interface cable between the tablet and the computer connected securely?
2. Check the settings on the DIP switches.
3. To see if there is a problem with the AC power adaptor, connect the adaptor to a component you know to be operational.
4. If the host computer is not receiving signals, make sure there is only one pointing device in the effective area at one time.

Troubleshooting

5. If you are receiving unusual coordinate data, check to make sure you are using the pointing device in the right modes.

Standard Stylus – Use nonpressure mode only

Pressure Stylus – Use pressure mode only

Switches and color bands are used to identify the different types of stylus. See Appendix B.

Operation mode is selected through DIP switch settings. See Appendix A.

Procedures to select pressure or nonpressure modes:

- Macintosh: Use the Control Panel. See "Macintosh Installation and Operation."
- IBM PC: Use a program. See "PC Installation and Utilities Manual."

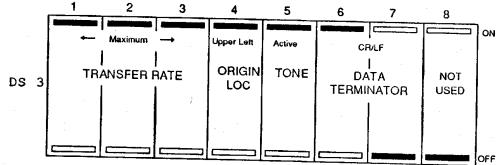
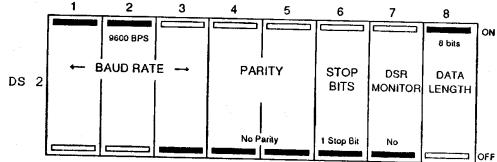
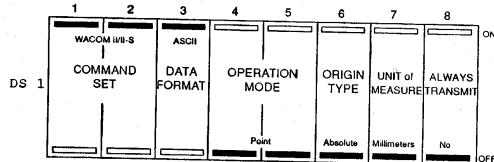
6. To talk with a WACOM technician:

Germany 49-2131-166001

USA 1-800-922-6635

Japan 81-480-72-7613

WACOM II (Factory) DIP Switch Defaults



■ = DIP switch position

WACOM II DIP Switch Options

DS 1	DS 2	DS 3
COMMAND SET WACOM II ON	BAUD RATE (bits/sec) 150 300 600 1200 2400 4800 9600 19200 None Odd Even	TRANSFER RATE (points/sec) 1 2 3 5 10 20 50 67 100 MAX
DATA FORMAT Binary OFF ON	DATA FORMAT Binary OFF ON	DATA TERMINATOR CR LF CR/LF ON
OPERATION MODE Point Suppressed Switch Stream Stream	OPERATION MODE 4 5 OFF ON ON ON	ORIGIN LOCATION Lower left Upper left ON
ORIGIN Absolute Relative	PARITY 4 5 OFF ON ON ON	TONE Disabled Enabled OFF ON
UNIT OF MEASURE Millimeters Inches	STOP BITS 1 2 OFF ON ON ON	DATA TERMINATOR 6 7 CR LF CR/LF ON
ALWAYS TRANSMIT No Yes	DATA LENGTH 8 7 bits 8 bits ON	NOT USED 8 OFF ON

■ ON or OFF
Factory Setting

A-1

A-2

WACOM II DIP Switch Definitions

DS 1 (DIP Switch 1)

1, 2 COMMAND SET WACOM II

3 DATA FORMAT ASCII or Binary
Format of the data sent from the digitizer to the host

4, 5 OPERATION Determines the mode in which coordinate data is sent to the digitizer:

- Point Mode
Sends one pair of X,Y coordinates with each switch press of the pointing device
- Suppressed Mode
Sends X,Y coordinates only when a "significant" pointing device event occurs. This event could be a:
 - Switch press or release
 - Entering or leaving the effective area
 - Change in X or Y greater than a specified value
- Switch Stream Mode
Sends X,Y coordinates continuously while a button or stylus switch is pressed
- Stream Mode
Sends X,Y coordinates continuously

6 ORIGIN TYPE

■ Relative

Like a traditional mouse every touchdown creates a new origin.

■ Absolute

The origin is fixed at the location selected with the ORIGIN LOCATION DIP switch.

7 UNIT OF MEASURE

Inches or millimeters. Measurement unit of the data coordinates.
See "Resolution" under "General Specifications" in Appendix B.

8 ALWAYS TRANSMIT

■ Yes

In stream mode, coordinates will be sent continuously when the pointing device is in or out of the effective area.

■ No

In stream mode, no data will be sent to the host when the pointing device is out of the effective area. For more details on this parameter, refer to the *WACOM Programmer's Manual*, AL command.

WACOM II DIP Switch Definitions *(continued)*

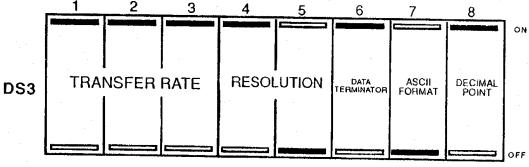
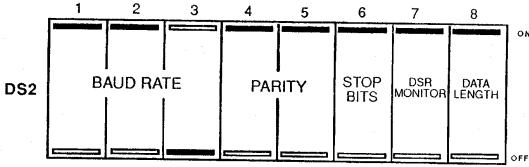
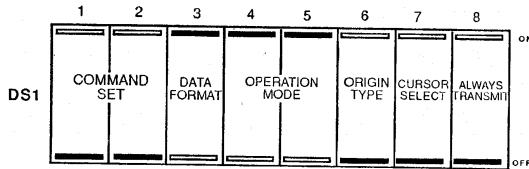
DS 2 (DIP Switch 2)

1, 2, 3BAUD RATE	150 - 19,200 bps Number of bits transmitted per second from the digitizer to the host. Baud rate for the digitizer and host must be the same.
4, 5 PARITY	Parity, a method used to determine if an error occurred in data transmission, can be even, odd, or none. Parity for the digitizer and host must be the same.
6 STOP BITS	Number of stop bits to signal the end of a character. Stop bits for the digitizer and host must be the same.
7 DSR MONITOR	Determines whether or not the tablet responds to the DSR input signal of the RS-232C serial port.
8 DATA LENGTH	The number of bits in a character. Must be the same for digitizer and host.

DS 3 (DIP Switch 3)

1, 2, 3 TRANSFER RATE	Number of coordinate pairs transmitted per second with related switch or pressure data.
4 ORIGIN LOCATION	If ORIGIN TYPE is "absolute" (DS 1, switch 6), ORIGIN LOCATION determines whether the origin is in the upper or lower left of the tablet.
5 TONE	Activates or disables audio feedback
6, 7 DATA TERMINATOR	A data delimiter — CR/LF, CR, LF. The characters sent to signal the end of an X,Y coordinate pair in ASCII mode data transmission
8 NOT USED	Must be set to OFF (mandatory setting)

Microgrid II DIP Switch Defaults

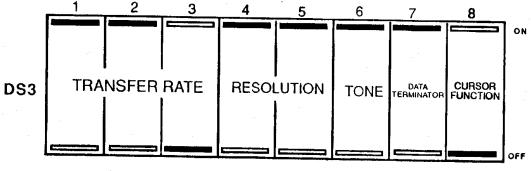
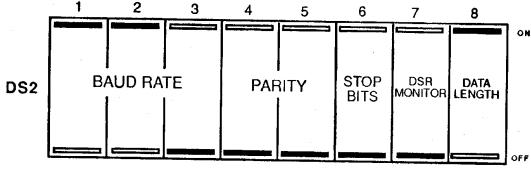
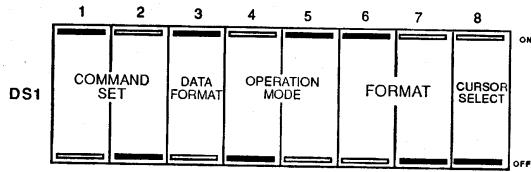


■ = DIP switch position

Microgrid II DIP Switch Options

DS 1		DS 2		DS 3	
COMMAND SET	1 Microgrid II	2 OFF	BAUD RATE (bit/sec)	1 150	TRANSFER RATE (points/sec)
	OFF	ON		2 300	1 OFF
DATA FORMAT	3 Binary	OFF		3 600	2 OFF
	ON	ON		5 1200	5 OFF
OPERATION MODE	4 Point	5 OFF		10 2400	10 OFF
	ON	ON		30 4800	30 OFF
	ON	ON		60 9600	60 OFF
	ON	ON		85 19200	85 OFF
Remote Request				100 ON	100 ON
Switch Stream				ON ON	ON ON
ORIGIN	6 Absolute	OFF	PARITY	4 None	RESOLUTION (lines/inch)
	ON	ON		5 Odd	4 ■
CURSOR SELECT	7 4-Button	OFF		200 ON	200 OFF
	16-Button	ON		254 ON	254 OFF
ALWAYS TRANSMIT	8 Off	ON	STOP BITS	1000 ON	1000 ON
	On	ON		1016 ON	1016 ON
	ON	ON		2 ON	DATA TERMINATOR
	ON	ON	DSR MONITOR	7 No	CR
	ON	ON		Yes ON	CR/LF
	ON	ON			ASCII FORMAT
	ON	ON			7 Inch/mm
DATA LENGTH	8 7 bits	OFF			OFF Normal
	8 bits	ON			ON No
DECIMAL POINT					8 Yes
					ON ON OR OFF
Defaults					■

CalComp DIP Switch Defaults

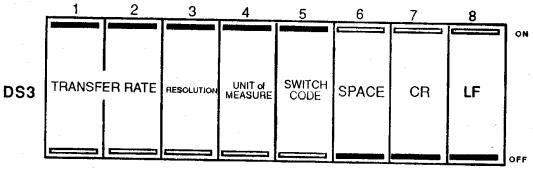
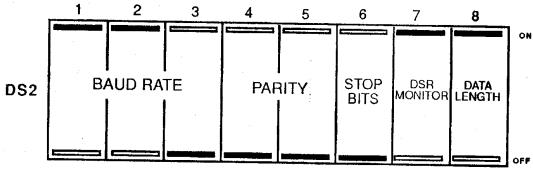
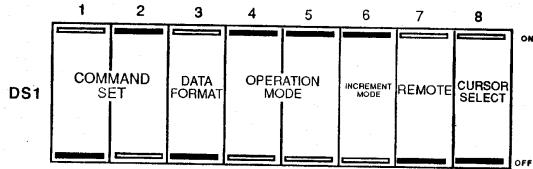


■ = DIP switch position

CalComp DIP Switch Options

DS 1		DS 2		DS 3	
COMMAND SET	1 CalComp ON	2 OFF	BAUD RATE (bits / sec.)	1 150 OFF	3 OFF
DATA FORMAT	3 Binary OFF	4 ON	300 OFF	1 ON	1 OFF
Binary	OFF	5 ASCII ON	600 OFF	2 OFF	OFF
ASCII	ON	6 ON	1200 OFF	5 ON	ON
OPERATION MODE	4 Halt OFF	5 Point ON	2400 ON	6 ON	ON
Halt	OFF	Point	4800 9600 19,200	ON ON ON	OFF ON ON
Point	ON	Track	4800 9600 19,200	OFF ON ON	ON OFF ON
Track	OFF	Run	4800 9600 19,200	ON ON ON	ON ON ON
Run	ON				
FORMAT	6 #1 OFF	7 #2 OFF	PARTITY	4 None Odd ON	5 NOT USED ON
#1	OFF	#2	ON	Odd ON	OFF ON
#2	ON	#3	OFF	Even ON	50 line/mm 40 line/mm 1000 line/inch
#3	OFF	#4	ON	ON	ON ON ON
#4	ON				
CURSOR SELECT	8 4-Button ON		STOP BITS	6 1 ON	6 TONE ON
4-Button	ON		DSR MONITOR	OFF	Enabled ON
16-Button			DSR MONITOR	ON	OFF ON
			No	OFF	ON
			Yes	ON	CR CR+LF
					ON
			DATA LENGTH	7 7 bits ON	8 CURSOR FUNCTION ON
			7 bits	OFF	ON
			8 bits	ON	Disabled ON
			Defaults		■ ON or OFF

GTCO DIP Switch Defaults



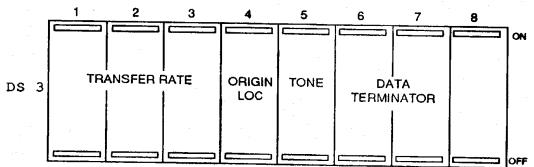
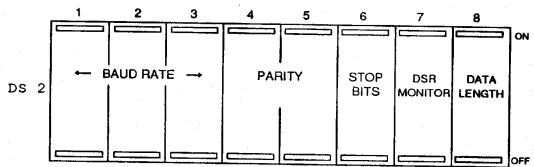
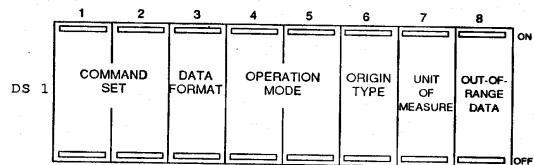
■ = DIP switch position

GTCO DIP Switch Options

DS 1		DS 2		DS 3	
COMMAND SET	1 GTCO OFF	2 ON	BAUD RATE (bits / sec.)	1 150	2 12
DATA FORMAT	3 Binary OFF	3 ON	OFF	OFF	OFF
	ASCII ON		OFF	ON	ON
OPERATION MODE	4 Point OFF	5 Stream ON	600	100	200
	Stream ON		1200	ON	MAX
			2400	ON	ON
			4800	ON	ON
			9600	ON	ON
			19,200	ON	ON
				ON	ON
				ON	ON
INCREMENT MODE	6 No ON	7 Yes ON	PARITY	4 None OFF	5 Odd ON
				ON	ON
				ON	ON
				ON	ON
REMOTE	8 Disabled OFF	9 Enabled ON	STOP BITS	6 1 ON	5 2 ON
				ON	ON
CURSOR SELECT	10 4-Button OFF	11 16-Button ON	DSR MONITOR	7 No ON	6 Yes ON
				ON	ON
				ON	ON
DATA LENGTH	12 7 bits OFF	13 8 bits ON	SPACE	8 LF ON	7 CR ON
				ON	ON
				ON	ON
				ON	ON
Defaults	14 ■ ON or OFF			8 OFF	8 ON

User DIP Switch Settings

Use this page to record your configuration.



— = DIP switch position

B

Tablet Specifications

Size	A0
Surface Standard	Model Numbers SD-013A
Active area (mm)	1193 x 889
Physical size (mm)	1454 x 1091 x 30
Weight (kg)	33
Command Sets	
WACOM II	✓
Microgrid	✓
CalComp	✓
GTCO	✓
Input current	400 mA max @ DC12V
Power supply	DC 12V

General Specifications

Resolution	A0
mm mode	0.02 mm
inch mode	0.001 inch
Accuracy	± 0.15 mm
Maximum reading height	4 mm with cursor
Maximum report rate	205 points per second
Origin position	Arbitrarily selectable within effective reading range
Interface	RS-232C
Operating temperature	5°C - 40°C (41°F - 104°F)
Storage temperature	-10°C - 60°C (14°F - 140°F)
Humidity	20% - 80% (noncondensing)

Pointing Device Specifications

Four-Button Cursor SC-410	Size (mm) Weight (grams)	62 x 130 x 24 55
Sixteen-Button Cursor SC-610	Size (mm) Weight (grams)	62 x 130 x 24 85
Pressure Stylus		
Band color	SP-300 Blue	SP-310 Red
Switches	Pressure-sensing tip	Pressure-sensing tip
Pressure (grams)	0-500	0-300
Feel	Firm	Soft
Refills*	Duracon	Duracon
Tip stroke (mm)	1.2	1.2
Size (mm) (inches)	11 x 148 .43 x 5.8	11 x 148 .43 x 5.8
Weight (grams)	11	11
Standard Stylus		
Tip Travel	SP-200 0.2 mm (nonstroke)	SP-210 0.9 mm (stroke)
Band/Switch Color	Gray	Red
Switches	Tip and side	Tip and side
Refills*	Duracon or color (type 4C)	Duracon or color (type 4C)
Size (mm)	11 x 148	11 x 148
Weight (grams)	11	11
Slim Stylus		
Tip Travel	SP-200A 0.2 mm (nonstroke)	SP-210A 0.9 mm (stroke)
Clip Color	Gray	Magenta
Switches	Tip and side	Tip and side
Refills*	Duracon	Duracon
Size (mm) (inches)	11 x 142.5 .43 x 5.6	11 x 142.5 .43 x 5.6
Weight (grams)	8.4	8.4

* See "Maintenance" for purchase information

RS-232C Digitizer Circuit



(RS-232C connector on the digitizer back)

